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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,118	09/21/2001	Steven R. Pearson	BEA920010027US1	5751

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EXAMINER
FILIPCZYK, MARCIN R

ART UNIT	⋮ PAPER NUMBER
2163	

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 January 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 September 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

This Action is responsive to Applicant's response filed January 24, 2006. Claims 1-14

are pending.

To expedite the process of examination Examiner requests that all future correspondences in regard to overcoming prior art rejections or other issues (e.g. amendments, 35 U.S.C. 112, objections and the like) set forth by the Examiner that Applicants provide and link to the most specific page and line numbers of the disclosure where the best support is found (see 35 U.S.C. 132).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Regarding claims 1, 6 and 9, claim 1 being exemplary, the step of "compiling" is

indefinite. It is not clear what data is compiled since the output stream is empty before

compilation. The step of "placing" and "placing means" is indefinite. It is not clear what the

metes and bounds of placing are. Examiner suggests replacing placing with a definitive term

used in the art such as copying or inserting without adding new subject matter. The step of

"switching from processing a next data item" is indefinite. It is not clear what data is switched

or how it is switched. The term "formation" is indefinite. Formation is not consistent with the

preamble and should be replaced with creating. The phrase "exclusive use" is indefinite. It is

not clear what the metes and bounds of exclusive use are in the context of the claim. The

segment of "a quantity of said input streams is an odd number greater than one" is indefinite.

The lowest odd number greater than 1 is 3, however, the claim appears to use only a first input stream and a second input stream, thus processing or interacting with 3 or more input streams is not taught or used in the claim. To expedite the processing of the examination, Examiner interprets the step of "a quantity of said input streams is an odd number greater than one" as two input streams.

Further regarding claim 1, the term "a node" is indefinite. It is not clear how one input stream has a node and the other does not. Examiner suggests deleting node from the claim.

Further regarding claims 1 and 6, the term merging is not consistent with the rest of the claim since the body of the claim does not merge any data. .

Further regarding claim 9, the step of "merges said input streams into said single output stream" is indefinite. It is not clear what input streams are merged or how they are merged.

Claims 2-5, 7, 8 and 10-14 depend from claims 1, 6 and 9 respectively, thus they are rejected on the same basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
Or,
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6 and 9 are rejected under 35 U.S.C. 102(b) as best as Examiner is able to ascertain as being anticipated by Smith (U.S. Patent No. 5,832,068).

Regarding claims 1, 6 and 9, Smith discloses a method, program and data structure for

creating a single output data stream by merging data items from two or more input streams

comprising: (merging being equated with organizing data, see fig. 1, items 10 and 12 col. 1, lines

19-24)

(*Note: Smith compares unique record identifiers, if a match occurs indicating it's a*

duplicate, that record is discarded and not processed, equivalent to Applicant's merging step of

simply merging two streams into one, just like Smith merges two input streams into one by

discarding the duplicate)

processing data items; (fig. 2)

assigning a status identifier to each input stream, said identifier reflecting a state of an

input stream; (fig. 3, 104)

comparing a status identifier of a first input stream with a status identifier of a second

input stream; (fig. 3, 106)

compiling data streams; (fig. 2)

identifying a data item being processed from a second input stream as being a duplicate

of a previously processed data item from a first input stream based on said assigned duplicate

data item; (fig. 3, items 106 and 108)

processing data items from said second input stream responsive to said assigned duplicate

status identifier (col. 8, lines 47-51), wherein the step of processing said value merges said input

streams into a single output stream and avoids exhausting one of said input streams when a

quantity of said input streams is an odd number greater than one (col. 8, lines 51 and 52, fig. 4, items 208, 210 and 212).

(Note: record index is equivalent to nodes, see fig. 2)

(To expedite the processing of the examination, Examiner interprets the step of "a quantity of said input streams is an odd number greater than one" as two input streams)

Claims 1, 5, 6, 9 and 13 are rejected under 35 U.S.C. 102(a) as best as Examiner is able to ascertain as being anticipated by Applicant's Admitted Prior Art (AAPA), Applicant's Disclosure.

Regarding claims 1, 6 and 9, Smith discloses a method, program and data structure for merging data items from two or more input streams comprising: (fig. 5A and page 1, par. 5, lines 2 and 3)

assigning a status identifier to each input stream, said identifier reflecting a state of an input stream; (fig. 5A, item 500 and see nodes)

processing data items; (fig. 5A)

comparing a status identifier of a first input stream with a status identifier of a second input stream; (fig. 5A, nodes and page 1, par. 5, lines 7 and 8)

compiling data streams; (fig. 5A)

identifying a data item being processed from a second input stream as being a duplicate of a previously processed data item from a first input stream based on said assigned duplicate data item; (fig. 5A, nodes and page 1, par. 6, lines 3-5, *duplicate*)

processing data items form said second input stream responsive to said assigned duplicate

status identifier (page 1, par. 5, lines 8-11 and par 6, line 4), wherein the step of processing said

value merges said input streams into a single output stream and avoids exhausting one of said

input streams when a quantity of said input streams is an odd number greater than one (fig. 5A

and page 1, par. 5, lines 2 and 3 and 10-11).

(*Note: AAPA teaches any number of input streams represented by the letter N*)

AAPA further teaches each node of the selection tree comprises an identifier of one of

the input streams, and a reference to a data item being processed from that one of the input

streams (fig. 5A, item 500 and nodes)

Regarding claims 5 and 13, AAPA discloses the method is a replacement selection

method using a loser oriented selection tree (fig. 5 and page 1, paragraphs 5 and 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 2-4, 7, 8, 10-12, and 14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Smith (U.S. Patent No. 5,832,068) in view of AAPA.

Regarding claims 2-4, 7, 8, 10-12 and 14, Smith discloses all of the claimed subject matter as discussed above including a status identifier corresponding to duplicate data item; (fig. 3, items 106 and 108, Smith), but does not expressly teach a value corresponding to "empty", "duplicate", "merging" or "done". Examiner states that assigning value identifiers for specific comparisons is a common practice in computer programming. For instance, AAPA teaches an ordered merging replacement selection wherein each node of a tree stores information about a "loser" of a prior sort key comparison among its children. AAPA further teaches the status identifier has a value corresponding to duplicate keys (p.1, par. 6, lines 6 and 7; *-1,0,1 where 0 is done or a duplicate*).

Hence, it would have been obvious to a person of ordinary skill in the art having Smith's indicator along with AAPA at the time the invention was made to modify Smith's indicator in view of AAPA so that the unique integer values would indicate a specific task (e.g. value two for merging) because Smith's data record exclusion indicator includes a generated unique data record identifier (col. 3, lines 27-29, Smith) and AAPA teaches values corresponding to comparisons, including duplicate keys (page 1, par. 6, lines 5-7, AAPA), thus the modification would be simple having both arts at hand. One would have been motivated to combine Smith and AAPA to process data faster and more efficiently.

Response to Arguments

Applicant's arguments filed January 24, 2006 have been fully considered but they are not persuasive. The arguments and responses are listed below. Note, Applicant herein refers to the Applicant's representative, Rochelle Lieberman.

On pages 6 and 7 of the 1/24/06 response, Applicant requests that by amending claims all

35 U.S.C. 112, second paragraph rejections should be withdrawn, specifically the rejection to the

limitation of "a quantity of said input streams is an odd number greater than one".

Examiner disagrees. Applicant's amendment did not overcome all the indefiniteness

issues previously raised, for details please see rejection above. Regarding the limitation, "a

quantity of said input streams is an odd number greater than one", it remains indefinite. The

body of the claims recites and teaches two input streams being compared, however, the entire

process of processing, merging and executing two input streams is not clear and is rejected as

being indefinite. The alleged teaching of processing and merging an odd number greater than

one of input streams is not taught or performed in any of the 14 claims.

On page 9 of the 1/24/06 response regarding Smith, Applicant argues that, "Applicant's

invention differs from Smith in the manner in which the output stream is built".

Examiner disagrees. Applicant's claims comprise many inconsistencies and are rejected

as being indefinite. As a result, Examiner rejects the pending claims as best as can be

ascertained. Smith processes data from a second input stream in response to a duplicate status

identifier, see fig. 3, items 106 and 108, as claimed.

On page 10 of the 1/24/06 response regarding AAPA, Applicant argues that AAPA does

not manage an odd number of three or greater of input streams.

Examiner disagrees. The argued feature is not clearly claimed, further, AAPA permits

merging any number of input streams (see page 1, par. 5, lines 10-11, AAPA), any number

including both odd and even number of input streams.

On pages 11 and 12 of the 7/25/05 response, Applicant argues that prior art (Smith in

view of AAPA) do not teach four integer options.

Examiner disagrees. As stated in previous Office Action, Smith and AAPA teach the

status identifier has a value corresponding to empty, duplicate, merging and done (p.1, par. 6,

lines 6 and 7; *-1,0,1 where 0 is done or a duplicate*, AAPA). **Note, it is a common practice in**

computer programming to assign value identifiers for specific tasks. According to the

claims and specification, each value corresponds to a unique identifier, and **it is notoriously well**

known in computer programming to assign unique identifiers for empty, duplicate,

merging, done, equal, etc. For more information please see rejection.

With respect to all the pending claims 1-14, Examiner respectfully traverses Applicants

assertion based on the discussion and rejection above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this
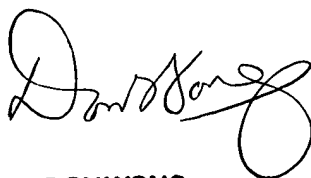
final action.

    THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Marc R. Filipczyk whose telephone number is (571) 272-4019.

The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

    Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MF
March 28, 2006

DON WONG
SUPERVISORY PATENT EXAMINER